Performance Objectives And Instructional Cues	OUTLINE AND PRESENTATION

LESSON PLAN

INTRODUCTION

A. Course Title: Technology Crimes

Instructional Goals:

Computer Crimes, Introduction to Computers, Child Sex Crimes and Computers, Processing Computers, Technology & Police and Topics Of Discussion

Instructional Objectives:

To give basic knowledge to Cadets or Recruits

Instructional Methods:

Class lecture with class participation and overheads

Estimated Time: 2 hrs

Instructor_____ Presentation Date_____

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Approved by: NMLEA JAN 2014

Revised_____ Date_____

- **Agenda**
- **Computer Crimes**
- **Introduction to Computers**
- **Child Sex Crimes and Computers**
- **Processing Computers**
- **Technology & Police**
- **Topics Of Discussion**
- **What is Computer Crime?**
- **Computer Related Crimes**
- **Computer Specific Crimes**
- **Unique Challenges of Computer Crime**

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- **What Is Computer Crime?**
- **You know what crime is…**
- **You know what computers are…**
- **But what is computer crime?**
- **Let's define computer crime...**
- **What Is Computer Crime?**
  There is no one correct answer.
  Different jurisdictions define computer crime in various ways.
- **What Is Computer Crime?**
  A Computer May Be:
  - » **Instrumentality of a crime (Tool)**
  - » **A repository of evidence (Ancillary to Crime)**
  - » **Fruit of the crime (Target)**
  - » **Contraband**
- **How Computers Are Used by Criminals**
- **Accounting/spreadsheets**
- **Data bases**
- **Telecommunications/access/e-mail**
- **Word processing/diaries**
- **Graphics**
- **A New Generation of Criminal**
  Criminals "adapt and adopt" new technologies
- **Credit card "skimmers"**
- **ATM card readers**
- **Identity Theft**
- **Scams and fraud migrate online**
- **A New Generation of Criminal**
  Consumer Spending Online:
- **$65 billion in North America predicted in 2001**
  Money Transfers over the Fedwire:
- **1998 - 389,269 transfers daily, $1.304 trillion in value**
- **1999 - 407,925 transfers daily, $1.362 trillion in value**
- **2000 - 429,816 transfers daily, $1.506 trillion in value**
- **Problems In Reporting Computer Crime**
- **Computer Crime falls "between the cracks" of formalized reporting**
- **Computer Crime is underreported by corporate victims**
- **In a 2000 survey, 38% of corporate victims failed to report intrusions to anyone.**
  Reasons given were:
  - » **Fear of Negative Publicity**
  - » **Competitors finding out**
  - » **Civil remedy sought instead**
  - » **Unaware the incident could be reported**
- **Computer Related Crimes**
- **Bubble Theory of Fraud-**
  - » **Fraud migrates to an area of lesser control**
  - » **Potter's Law-**
  - » **Fraud occurs at the point of least resistance**

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- **Computer Related Crimes**
- **Cellular Phone Cloning/Fraud**
  - » **Analog**
  - » **Digital**
- **PBX (Private Branch Exchange) hacking**
  - » **DISA**
  - » **Voice Mail**
  - » **Trafficking of Stolen Phone Access Codes**
  - » **Looping**
- **Computer Specific Crimes**
- **Theft of components**
  - » **Memory and other components removed from computers**
  - » **Shipments of memory chips are being hijacked**
- **Theft of laptops**
  - » **Businesses, Universities**
  - » **Airports**
  - » **Federal Facilities**
- **Computer Specific Crimes**
- **Internet Technology - a bonanza for child pornographers…**
  - » **Easy access to like-minded people through newsgroups, IRC, chat rooms**
  - » **Scanners, Digital Cameras, Web Cams now cheaply available**
  - » **Privacy technologies have made anonymity easier**
- **Innocent Images -**
  - » **FBI operation begun in 1995, Baltimore Field Office - now in 11 Field Offices**
  - » **400+ convictions to date.**
- **Computer Specific Crimes**
- **Access banking computer systems**
- **Access Air Traffic Control Systems**
- **Access Electric Power Grids**
- **Access Pharmaceutical/Medical systems**
  - » **National Library of Medicine Intrusion**
- **Bloomberg LP, a financial information company, blackmailed for $200K by would-be hackers**
- **Computer Specific Crimes**
- **Value of Intellectual Property**
- **Ways of accessing information:**
  - » **Dumpster Diving**
  - » **Social Engineering**
  - » **Physical access to facilities by custodial or security personnel**
  - » **Surplus hard drives not sanitized**
- **Computer Specific Crimes**
- **Male**
- **White or Asian A Profile:**
- **Share information with others: through news-groups, IRC, websites, publications**
- **Young**
- **Focused on technology**
- **Organizations -**

- » **l0pht**
- » **Cult of the Dead Cow**
- » **Phrack, 2600**

- **Computer Specific Crimes**

Activities:

- **Pirated Software - (Warez)**
- **Cracking Copyrighted Software(Games)**
- **Web Page Vandalism**
- **System Intrusions**
- **Denial of Service (DoS) Attacks**
- **Steal Credit Card Info From Websites**
- **Computer Specific Crimes**

71% of businesses reported unauthorized access by insiders in 1999

- **Paul Barton, a fired Intel employee, deleted critical files, shutting down a plant's operations for 4 hours, causing $20,000 in damages.**
- **Herbert Pierre-Louis, Jr, a computer specialist at Purity Wholesale grocers, Boca Raton, FL, remotely accessed several sites, unleashing a virus, causing $80K of damage.**

In 1999, 53 businesses surveyed reported a loss due to electronic financial fraud totaling $55,996,000

- **The Challenge of Cybercrime**

Electronic Crime Scenes may span multiple jurisdictions

- » **Who Investigates? Who charges?**
- » **Cooperation of Agencies is necessary**

Identification/location of the perpetrator may be difficult

- » **Anonymity technology**
- » **Spoofing**
- » **Compromised accounts**

- **The Challenge of Cybercrime**

Keeping Up With The Pace of Technology

- » **Accessibility of PC's and the Internet**
- » **Moore's Law**
- » **Hard Drive Sizes make thorough searches more difficult**

- **The Challenge of Cybercrime**
- **Lack of Adequate Legislation for Computer Offenses**
- **Lack of Technical Knowledge by Judges, Attorneys**
- **Case Law Still in Early Stages for Computer Crime**
- **The Challenge of Cybercrime**
- **Financial**
  - » **Purchase & Maintain Equipment for Examinations**
  - » **Training Expenses**
- **Manpower**
  - » **Permanent vs Rotating Position**
  - » **Prioritizing Computer Crime vs "Real Crime"**
- **Conclusions...**
- **Criminals are a constant in society.**
- **Criminals' economic needs are continuous.**
- **Criminals will utilize and adapt the latest technologies to their ends.**

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- **Criminals steal from where the wealth is stored**
- **Conclusions...**

  Investigators need new resources, skills, perspectives and techniques to enable them to continue to be effective as we enter the...
- **Review...**
- **Definition and Scope of Computer Crime**
- **Technological Challenges - Internet, Rapid Evolution of Technology**
- **Fraud, Counterfeiting, Sexual Victimization of Children**
- **Jurisdictional and Legal Problems Concerning Cybercrime**

- **USB THUMBDRIVE**
- **THUMBDRIVE**
- **THUMBDRIVE**
- **THUMB DRIVES**
- **TREK**
- **THUMB ATTACHED TO USB PORT**
- **DRIVERLESS USB**
- **JAZZ DISK**
- **MULTIMEDIA CARD**
- **SMARTMEDIA MEMORY**
- **SONY MEMORY STICK**
- **SONY MEMORY MOUSE**
- **ZIP DRIVE**
- **ZIP DISK**
- **QUESTIONS????**
- **Internet Crimes Against Children**
- **Child Abduction Statistics**

  Good News
- **75% of all children return within 24 hours**
- **95% of all abducted children return alive**

  Bad News
- **There are predators who abduct and murder children**
- **44% die within the first hour**
- **74% die within the first three hours**
- **99% die within the first 24 hours**
- **40% are dead before they are reported missing**
- **70% of those located are found by accident not by a good search**
- **1999 Abductions**
- **262,100 total abductions**
  - » **203,900 of these were family abductions**
    - **almost 75% of these were taken from their own home or another's home or yard**
  - » **58,200 of these were non-family abductions**
    - **99% returned home**
    - **only 115 of these were of the most serious type**

- almost 60% of the 115 were returned safely
- over 50% were taken from the street, from a vehicle, or from a park or wooded area

- Non-Family Abductions

  Most missing children are not abducted

  - » poor supervision
  - » lost
  - » domestic discord
  - » runaway
- Most at Risk
- female
- Caucasian
- school age
- Initial Assessment
- ASSUME THE WORST UNTIL PROVEN OTHERWISE
- witnesses' accounts of the incident (if any)
- the victim's age
- activity the victim was engaged in when last seen
- history of disappearances
- prior incidents with family
- any previous similar incidents within the area that were reported to the police
- Law Enforcement

  If a child is missing:
- An accurate evaluation of the missing-child episode is absolutely vital to proper case handling and successful resolution
- How does this apply to computers?
- Bad Guys
- Used to roam parks, schools, arcades, etc.
- Bad Guys
- Now access your children through the Internet
- Online Victimization

  Study printed in June 2000

  1,501 youths ages 10-17 who use the Internet regularly (at least once a month) were surveyed
- Online Victimization
- 1 in 5 received a sexual solicitation or approach over the Internet in the last year
- 1 in 33 received an aggressive sexual solicitation
- 1 in 4 had unwanted exposure to pictures of naked people,or people having sex in the last year
- Online Victimization
- 1 in 17 was threatened or harassed
- Approximately 1/4 of young people who reported these incidents were distressed by them
- less than 10% of sexual solicitations and only 3% of unwanted exposure episodes were reported to authorities
- Online Victimization
- About 1/4 of the youth who encountered a sexual solicitation or approach told a parent

- **Almost 40% of those reporting an unwanted exposure to sexual material told a parent**
- **Only 17% of youth and approx. 10% of parents could name a specific authority to which they could make a report**
- **Online Victimization**
- **In households with home Internet access, 1/3 of parents said they had filtering or blocking software on their computers at the time they were interviewed.**
- **For youth encountering unwanted exposures to sexual material, it came up as a result of:**
- **Searches (47%)**
  - » **www.butt.com**
  - » **www.fbi.com**
  - » **www.whitehouse.com**
- **Misspelled addresses (17%)**
  - » **www.encyclopdia.com**
- **Links in web sites (17%)**
- **Online Victims**
- **Girls 66% vs. Boys 34%**
- **77% were age 14 or older**
- **The 10-13 year olds were disproportionately distressed**
- **Do the Victims Report?**
- **49% did not tell anyone**
- **10% reported to authorities (teacher, ISP, or law enforcement**
- **Online Perpetrators**
- **97% were persons the youth originally met online**
- **How offenders use the Internet**
- **Identify the victim**
- **Groom the victim**
- **Educate the victim**
- **Access victim**
- **and...**
- **Identify other suspects**
- **Educate other suspects**
- **Validate suspect behavior**
- **NAMBLA (North American Man/Boy Love Association**
- **Rene Guyon Society (motto is “sex before eight or else it’s too late”)**
- **PIE (Pedophile Information Exchange)**
- **SO...**
- **If it is determined that the child might have been abducted or has run away:**
- **find out accessibility to a computer**
- **request immediate assistance from an on scene analyst**
- **ask parents about child’s online activity**
  - » **chat rooms, private chat rooms, education rooms, game rooms, teleconferencing, e-mail, bulletin boards**
- **secure the missing child’s room**
- **secure any other possible crime scene’s**
- **search warrants**
  - » **crime scene locations (to include suspect’s home)**

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- » **computers (victim's and suspect's)**

- **If the child has been a victim but has NOT been abducted:**
- **Obtain as much information as possible from the child**
  - » **detailed information about individuals he/she has chatted with**
  - » **screen names**
  - » **passwords**
  - » **bulletin boards**
  - » **newsgroup subscriptions**
- **UNDERCOVER OPERATIONS**
- **Parents should:**
- **be totally and completely involved with your children**
- **know what they are wearing**
- **know where they are going**
- **know whom they are going with**
- **know their friends**
- **know the parents/guardians of the friends**
- **know your neighbors**
- **know your teachers/coaches and people who work at the school**
- **monitor their activities on the computer**
- **monitor and be aware of changes in behavior and demeanor**
- **don't be apprehensive about confronting issues that concern you**
- **www.missingkids.com**
- **INTERNET CRIMES AGAINST CHILDREN**
- **MANUFACTURE CHILD PORNOGRAPHY**
- **DISTRIBUTION OF CHILD PORNOGRAPHY**
- **SEXUAL EXPLOITATION**
- **SEXUAL HARASSMENT**
- **KIDNAP**
- **MURDER**
- **Introduction**

LAW OF CHILD INTERNET EXPLOITATION

- **New Mexico Law**
- **Federal Law**
- **TYPES OF CRIMES**
- **Child luring / transportation**
- **Child pornography**
- **CHILD LURING & TRANSPORTATION**
- **CHILD LURING**
  30-37-3.2(B) NMSA

It is a crime to:

- **induce a child under 16**
- **by means of a computer**
- **to engage in sex act or obscene performance**
- **when perpetrator is 3 years older / victim**

[4th degree felony]

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- **TRANSPORTATION FOR ILLEGAL SEXUAL ACTIVITY**
  18 U.S.C. § 2422 (b)

It is a crime to:

- **Persuade, induce, entice, or coerce**
- **through interstate commerce (mail/internet)**
- **a child under 18**
- **to engage in criminal sexual activity**

[10 years imprisonment]

- **TRANSPORTATION OF MINORS**
  18 U.S.C. § 2423(b)

It is a crime to:

- **travel interstate**
- **with intent to engage in criminal sexual activity**
- **With a child under 18**

[15 years imprisonment]

- **MAKING CHILD PORNOGRAPHY**
- **SEXUAL EXPLOITATION OF CHILDREN**
  30-6A-3 (C) NMSA

It is a crime to:

- **cause or permit a child**
- **to engage in any obscene sexual acts**
- **with intent to record the acts**

[3rd degree felony-under 18]
[2nd degree felony-under 13]

- **SEXUAL EXPLOITATION & OTHER ABUSE OF CHILDREN**
  18 U.S.C. § 2251(a)

It is a crime to:

- **cause a child to engage in sexually explicit conduct**
- **to produce a visual depiction of the conduct**
- **if the child/depiction/materials used, travel interstate**

[10-20 years imprisonment]

- **POSSESSION OF CHILD PORNOGRAPHY**
- **SEXUAL EXPLOITATION OF CHILDREN**
  30-6A-3 (A) NMSA

It is a crime to:

- **intentionally possess obscene visual or print medium**
- **which depicts prohibited sexual acts**
- **in which a participant is a child**

[4th degree felony]

Performance Objectives And Instructional Cues	OUTLINE AND PRESENTATION

- **SEXUAL EXPLOITATION OF CHILDREN**
  30-6A-2 (E) NMSA

Obscene defined:

- **appeals to prurient interest in sex-average person/contemporary community standards**
- **portrays prohibited sex in patently offensive way**
- **lacks serious literary, artistic, political, or scientific value**
- **SEXUAL EXPLOITATION & OTHER ABUSE OF CHILDREN**
  18 U.S.C. § 2252(a)(4)(b)

It is a crime to:

- **possess a depiction of a child engaging in sexual conduct**
- **which passes interstate or internationally**

[5 years imprisonment]

- **DISTRIBUTION OF CHILD PORNOGRAPHY**
- **SEXUAL EXPLOITATION OF CHILDREN**
  30-6A-2 (B) NMSA

It is a crime to:

- **distribute obscene visual or print medium**
- **which depicts prohibited sexual acts**
- **in which a child participates**

[third degree felony]

- **SEXUAL EXPLOITATION & OTHER ABUSE OF CHILDREN**
  18 U.S.C. § 2252(a)(2)

It is a crime to:

- **Transport, ship, distribute, sell, or possess with intent to sell**
- **A depiction of a child engaging in sexual conduct**
- **Which passes interstate or internationally**

[15 years imprisonment]

- **MANUFACTURING CHILD PORNOGRAPHY**
- **SEXUAL EXPLOITATION OF CHILDREN**
  30-6A-3 (D) NMSA

It is a crime to:

- **manufacture obscene visual or print medium**
- **which depicts prohibited sexual acts**
- **in which a child participates**

[2nd degree felony]

- **SEXUAL EXPLOITATION & OTHER ABUSE OF CHILDREN**
  18 U.S.C. § 2252(a)(B)(2)

It is a crime to:

- **reproduce child pornography**
- **for interstate or international distribution**

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[15 years imprisonment]

- **ADVERTISING CHILD PORNOGRAPHY**
- **SEXUAL EXPLOITATION & OTHER ABUSE OF CHILDREN**

18 U.S.C. § 2251(c) (1)

It is a crime to:

- **advertise, seek, or offer**
- **interstate or internationally**
- **depictions of sexually explicit children's conduct**

[10-20 years imprisonment]

- **Electronic Communications Privacy Act (ECPA)**

• In 1986, Congress adopted the Electronic Communications Privacy Act ("ECPA"). 18 USC § 2701

• ECPA is the principal law governing law enforcement surveillance of electronic communications. Although mainly aimed at law enforcement, ECPA also imposes obligations on private parties, including Internet Service Providers (ISPs).

- **ECPA cont…**

• The ECPA was updated in 2001 with the USA Patriot Act. The Patriot Act amended the statute in numerous places to remove telephone-era language. The goal was to make the statute apply to the modern communications medium used today.

- **ECPA cont…**
- **ECPA makes two general distinctions in how to obtain evidence:**

First, it distinguishes between (1) information acquired in real-time, and (2) historical information.

Second, it distinguishes evidence from an ISP into three categories: (1) the content of specific communications, (2) transactional information and (3) subscriber information

- **Questions?**

Any Questions?

- **Processing Computer Crime Scene/Seizing Systems**
- **Intelligence Gathering**
- **Site is a Home/Business? Private, Public, Corporate?**
- **Physical site check?**
- **MIS - Cooperating?**
- **Can informant get tech inside?**
- **Evidence that you seek can be stored in MULTIPLE LOCATIONS…**
  - » **Backup Tapes**
  - » **Network Drives (mirrored/redundant or arrayed systems)**
  - » **Selected Servers/Firewalls**
- **Intelligence Gathering**

Performance Objectives And Instructional Cues	OUTLINE AND PRESENTATION

- **Is there a stand alone or network computer in use?**
  GET DESCRIPTION of computer!
- **What evidence do you want?**
- **What type of Oper. System?**
- **What software is in use?**
- **How sophisticated is the suspect?**
- **Is there DATA HIDING or ENCRYPTION?**
- **Sole Use or Multiple use of the so called suspected computer?**
- **Wiretap or Data-scope, Keystroke Monitoring (legally sound)?**
- **Raid Preparation:**
  Some Tools Needed
  Computer Tool Kit
  - » **Screw drivers**
  - » **Wire Cutters**
  - » **Hammer**
  - » **Nail puller**
  - » **Cables Floppy disks (color coded)**
  - » **Floppy Sleeves**
  - » **Batteries (CMOS, Regular, etc.)**
  - » **Software**
- **Raid Preparation:**
  Items Needed
- **Bags - Large/Small**
- **Boxes - Large/Small**
- **Evidence - Wiring Tags**
- **Bubble Wrap**
- **Rubber Bands**
- **Evidence Tags**
- **Indelible felt tip pen**
- **Raid Preparation:**
  Items Needed/Considerations
- **Cameras; still, video, digital?**
- **Audio Tape - your voice notes.**
- **DNR or similar device**
- **Laptop / Printer**
- **Storage Facilities**
- **Line-up resources, expertise needed?**
- **Include expert assistance in S/W**
- **Small Network Takedowns:**
  - » **Take What Computers?**
  - » **Take the Server?**
  - » **Take the Hard Drive Only?**
- **Thoroughly brief raid officers on what and what NOT to do.**
- **What NOT to do. Please do NOT ...**
- **Press or turn on/off any electronic switches, buttons or controls.**
- **Randomly pull wires.**
- **Transmit on POLICE radios close to the computer.**

Performance Objectives And Instructional Cues	OUTLINE AND PRESENTATION

- **Allow “bad-guy” or other confederate to touch computer system.**
- **Remove anything for evidence without first recording exact location/condition found.**
- **Raid Preparation: Organization**
- **First test equipment**
- **Assign areas of responsibility**
- **Review officer safety information**
- **Review back-up contingency plans**
- **Synchronize timing**
- **Time raid so you have best control**
- **With approval from Technical Team Leader...**
  - » **NOW Disconnect modem lines from wall**
  - » **Disconnect phone lines from wall. <u>DO NOT UNPLUG MEMORY PHONES, FAX , OR MODEMS! Date is still there!</u>**
- **Processing the Scene**
- **Decision: pull the plug or not? (judgment)**
- **Put clean bootable floppies (disklock) in all drives and seal with evidence tape**
- **Check internal boards to be sure they are seated properly.**
- **Processing the Scene**
- **Photograph the entire crime scene S/W location (before & afters).**
- **Photo or video any processes on the monitor (what is on the screen).**
- **Photograph all books, papers, notes, etc.**
- **Photograph back of computer the wiring and DIP switch settings.**
- **Note relative positions of manuals**
- **Seize all manuals (most hardware and software as outlined in the S/W)**
- **Color code rooms and hallways**
- **Set up laptop computer and printer near exit**
- **Use DBMS program to catalogue evidence & print evidence tags.**
- **Teams should work assigned areas systematically**
- **Look inside manuals and books**
- **Look under desks, tables, chairs, and in clandestine areas of concealment**
- **Specifically LOOK for PASSWORDS or CODES the Perpetrator may have used**
- **Processing the Scene**
- **Cover keyboards with cardboard to protect keys.**
- **Photograph and diagram wiring**
- **Tag both ends of all wires**
- **Tag components and record ID information**
- **Only disassemble to facilitate transport**
- **Pack and pad components in boxes**
- **Label ends of boxes**
- **Record and print out inventory for owner (if required).**
- **Transportation and Storage**
- **Don't transport near radio antennas or power supplies**
- **Keep media away from electromagnetic fields**
- **Store in dry, clean location with moderate temperature**
- **Transportation and Storage**
- **Store floppy disks in sleeves and inside disk storage containers**
- **Clearly label components with a "<u>DON'T TOUCH OR OPERATE</u>" warning**

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If all else fails or you do not know what to do….

- » **Contact a high tech crime investigator, aka. ME**
- » **Contact someone from the National White Collar Crime Center (NW3C)**

Five Things to look for:

- » **Monitors**
- » **Cpu's**
- » **Diskettes**
- » **Printers**
- » **Spike Stips**

- **What can I do for you?**
  aka-High Tech Crime Investigator
- **Un-hide hidden files**
- **Recover deleted data**
- **Recover data from mutilated diskettes**
- **Find unintended data (slack)**
- **Technology & Police**
- **Spike Belt**
- **Body Armor (LA Shootout)**
- **Scanner (Listen to your transmissions)**
- **Questions?**

Any Questions?

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